

Serial No.: 10/577,339
 Examiner: Noah P. Kamen
 Reply to Office Action Mailed November 16, 2007
 Page 5 of 9

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Currently amended) A cooling system for an engine inside a power generator, ~~comprising: including a cool air suction hood (1), an engine housing side cover (2), an engine housing (6), a cool air cooling fan (9), an exhaust pipe (11); characterized in that,~~
~~the cool air suction hood (1) jointed to the engine housing side cover (2), the left air guide plate (3) and the right air guide plate (4) on the upper of the engine secured to the engine housing (6) and form two main cooling and ventilating chambers (A) and (B) on the left and right upper portion of the engine with the cylinder head (5) and the engine housing (6);~~
~~a bottom cooling and ventilating chamber (C) of the engine formed of the an engine bottom air guide plate (7) secured to the bottom of engine housing side cover (2), the side cover (2) and an engine crank case rear cover (8);~~
~~a double chamber cooling means of the secondary cooling cycle chamber (D) formed of the engine crank case rear cover (8), the cool air suction hood (1), the side cover (2), the left air guide plate (3) and the right air guide plate (4) on the upper of the engine, the cylinder head (5), the engine bottom air guide plate (7), the engine housing (6), a heat insulation chamber body (21), a sealing ring (22) and a heat insulation chamber rear hood (23)~~
~~an engine housing;~~
~~a cool air suction hood in front of the engine housing, the cool air suction hood including a built-in cool air cooling fan;~~
~~an engine crank case on the rear side of the engine housing including a rear cover;~~
~~an engine side cover on the front side of the engine housing, the engine side cover being fastened to the cool air suction hood;~~
~~a left air guide plate being secured to the upper left side of the engine housing and~~
~~a right air guide plate being secured to the upper right side of the engine housing;~~
~~a cylinder head hood on top of the engine housing and being secured to the left air~~

Serial No.: 10/577,339
Examiner: Noah P. Kamen
Reply to Office Action Mailed November 16, 2007
Page 6 of 9

guide plate, the right air guide plate and the cool air suction hood;

a bottom air guide plate on the bottom of the engine housing and being secured to the engine side cover;

a heat insulation chamber including the engine housing, the cool air cooling fan and the engine crank case therein, the heat insulation chamber having a heat insulation chamber body and a rear hood;

a sealing ring sealing a connection between the engine crank case and the rear hood of the heat insulation chamber;

a main left cooling and ventilating chamber on an upper left portion of the engine housing and being defined by the engine housing, the left air guide plate and the cylinder head hood;

a main right cooling and ventilating chamber on an upper right portion of the engine housing and being defined by the engine housing, the right air guide plate and the cylinder head hood; a main bottom cooling and ventilating chamber defined by the engine side cover, the rear cover of the engine crank case and the bottom air guide plate;
and

a double-cooling means including:

a first cooling means including the main left cooling and ventilating chamber, the main right cooling and ventilating chamber and the main bottom cooling and ventilating chamber;

a second cooling means including a secondary cooling cycle chamber defined by the engine side cover, the rear cover of the engine crank case, the cool air suction hood, the left air guide plate, the right air guide plate, the cylinder head hood, the bottom air guide plate, the engine housing, the heat insulation chamber body, the rear hood of the heat insulation chamber, and the sealing ring.

2. (Currently amended) The cooling system according to Claim 1, wherein the cool air suction hood [(1)] is made by a ~~the~~ process of polyester injection molding or aluminum-alloy die casting, and is connected to the engine side cover (2) ~~of the engine housing with bolts by bolts [(17)]~~.

Serial No.: 10/577,339
Examiner: Noah P. Kamen
Reply to Office Action Mailed November 16, 2007
Page 7 of 9

3. (Currently amended) The cooling system according to Claim 1, wherein the left air guide plate ~~[[3]]~~ and the right air guide plate ~~(4) on the upper of the engine~~ are made by ~~a the~~ process of polyester injection molding or steel sheet pressing, and are secured on the side ~~surfaces surface~~ of the engine housing ~~(6) with by bolts bolts (16)~~, which form the ~~two main left cooling and ventilating chamber and the main right cooling and ventilating chamber chambers (A,B)~~ on the ~~an~~ upper portion of the engine ~~housing~~ together with the engine cylinder head hood ~~[[5]]~~ provided with lifting lugs and an air guide plate engaging groove and the engine housing ~~[[6]]~~ provided with an air guide plate engaging surface.
4. (Currently amended) The cooling system according to Claim 1, wherein the ~~bottom~~ air guide plate ~~(7) on the bottom of the engine~~ is made by ~~a the~~ process of polyester injection molding or steel sheet pressing, and is secured to the bottom of the ~~engine side cover (2) of the engine housing with by bolts~~ ~~[[18]]~~.
5. (Currently amended) The cooling system according to Claim 1, wherein the ~~rear cover of the engine crank case rear cover (8)~~ provided with the engaging grooves for a the heat exhaust air hood and ~~an the~~ air guide plate is made by ~~a the~~ process of aluminum alloy die casting or steel sheet pressing.
6. (Currently amended) The cooling system according to Claim 1, wherein the engine cylinder head hood ~~[[5]]~~ ~~is are~~ made by ~~a the~~ process of aluminum alloy die casting or steel sheet pressing.
7. (Currently amended) The cooling system according to Claim 1, wherein the cool air suction hood ~~[[1]]~~ has a ~~built in cooling fan (9) and~~ permanent magnet motor ~~[[10]]~~, the ~~cool air~~ cooling fan ~~[[9]]~~ ~~sucking sucks~~ in cool air from ~~atmosphere~~ ~~atmospheric~~ and a slight quantity of hot air from the heat insulation chamber ~~housing (21)~~, the cool air firstly ~~cools~~ ~~cooling~~ the permanent magnet motor ~~(10) in the suction hood (1)~~,

Serial No.: 10/577,339
Examiner: Noah P. Kamen
Reply to Office Action Mailed November 16, 2007
Page 8 of 9

and then passing goes through the main left and right ~~main~~ cooling and ventilating chambers ~~[(A, B)]~~ and the main bottom cooling and ventilating chamber ~~[(C)]~~, and cooling cools radiator pieces in the upper portion of the engine housing ~~[(6)]~~, the radiator pieces at the bottom of the engine housing side cover ~~[(2)]~~ and an the exhaust pipe ~~[(11)]~~, then passing goes onto the rear cover of the engine crank case ~~rear cover (8)~~ with the engaging grooves for a the hot air exhaust hood and an the air guide plate, and cooling cools off a the muffler ~~[(13)]~~, and finally passing goes through the exhaust grooves on in the rear cover of the heat insulation chamber ~~rear cover (23)~~ and exiting the heat insulation chamber exhausts outside.

8. (Currently amended) The cooling system according to Claim 1, wherein the heat insulation chamber body ~~[(21)]~~ provides an air inlet groove in the front bottom thereof to ensure cooling for a voltage-converting ~~counter-converting~~ module ~~[(24)]~~.